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10/538,545

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EXAMINER

ALIE, GHASSEM

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,545	<b>Applicant(s)</b> RENSEN ET AL.	
	<b>Examiner</b> GHASSEM ALIE	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05/27/09.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-27, 29-31, 35, 36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) 35 and 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-27, 29-31 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18-27, 29-30 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto et al. (2001/0020409), hereinafter Hashimoto. Regarding claim 18, Hashimoto teaches a method for releasing a slug adhering to a stamp 2 in a punching machine 1, by carrying the stamp, after performing a punching operation on a sheet material, with the active stroke at least partially through a cutting opening (a) in a cutting plate 3 supporting the sheet material, and carrying the stamp during the return stroke back again through the cutting opening (a) in the cutting plate which close-fittingly encloses the stamp, wherein the cutting opening functions during the return stroke such that the side of the cutting plate 3a remote from the sheet material engages around the cutting opening as a scraping edge on the slug adhering to the stamp and releases it from the stamp. See Figs. 1-9 and paragraphs 60-64 in Hashimoto.

Regarding claims 19 and 38, Hashimoto teaches everything noted above including that the stamp is carried through the cutting opening in the cutting plate during the punching operation such that the periphery of the slug adhering to the stamp is released over only a part of the periphery from the cutting plate.

Regarding claim 20, Hashimoto teaches everything noted above including that the stamp 2 is carried through the cutting opening (a) in the cutting plate 3 during the punching

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operation such that the periphery of the slug adhering to the stamp is wholly released from the cutting plate.

Regarding claim 21, Hashimoto teaches everything noted above including that the return stroke of the stamp is continued so far that the cutting opening in the cutting plate and the sheet material are left clear by the stamp.

Regarding claim 22, Hashimoto teaches everything noted above including that after the sheet material has been left clear by the stamp, the processed sheet material is removed from the cutting plate.

Regarding claim 23, Hashimoto teaches everything noted above including a sheet material for processing is placed on the cutting plate before commencing the punching operation.

Regarding claim 24, Hashimoto teaches everything noted above including the slug released from the stamp is discharged. It should be noted that the slug is discharged through the opening below the opening a, b. See Fig. 4 in Hashimoto.

Regarding claim 25, Hashimoto teaches a punching machine for releasing a slug adhering to a stamp including a cutting plate 3 provided with at least one cutting opening (a), , at least one stamp 2 for linear intermittent displacement which is displaceable between a position in which the cutting opening in the cutting plate is left clear by the stamp and a position in which the stamp is carried through the cutting opening, and wherein the stamp passes close-fittingly through the cutting opening of the cutting plate, wherein the cutting opening in the cutting plate has a scraping edge 3a for releasing the slug adhering to the

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stamp. Hashimoto also teaches that the cutting plate is adapted to support a material layer for processing, and a side 3b of the cutting plate remote from the side supporting the material layer is substantially non-parallel relative to the side of the plate supporting the material layer such that only a part of a periphery of the slug adhering to the stamp 2 is released by the scraping edge. It should be noted that only the part of the slug that adhered to the stamp engages the scraping edge 3a is released by the scraping edge 3a. See Fig. 6 in Hashimoto.

Regarding claim 26, Hashimoto teaches everything noted above including that the free space between the stamp and the associated cutting plate in the position where the stamp is carried through the cutting opening is smaller than 0.02 mm. It should be noted that the free space between the stamp 2 and the cutting pate or the cutting edge 3a of the cutting plate is less than 5 to 10  $\mu\text{m}$  which is less than 0.02 mm. See paragraph 63 in Hashimoto.

Regarding claim 27, Hashimoto teaches everything noted above including that the cutting plate is adapted to support a material layer for processing, and the edge of the cutting opening on the side remote from the side supporting the material layer is sharp. It should be noted the edge of the cutting opening of the cutting plate 3 that is associated with the stamp 2 is sharp. The sharp edge is located remotely from a top surface of the cutting plate that supports the material layer. It should also be noted that the remote edge of the cutting opening is as sharp as the remote edge of the cutting opening in the current application. See Figs. 4-5, 9A in Hashimoto and Figs. 1-4 in the current application.

Regarding claim 29, Hashimoto teaches everything noted above including that the cutting pate 3 is supported by a punch plate with a passage (b) for the slug connecting onto the cutting opening in the cutting plate, which passage is larger than the cutting opening. It

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should be noted that the top section of the die 3 could be considered to the cutting plate and the lower section of the die 3 is considered to be the punch plate. It should also be noted that the passage (b) is larger than the cutting opening (a). See Figs. 4-5 in Hashimoto.

Regarding claims 30, Hashimoto teaches everything noted above including that the punch plate supports a plurality of plates. It should be noted that each side of the cutting opening has a cutting plate that is supported by the punch support plate.

3. Claims 25, 27 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Bakermans et al. (5,136,907), hereinafter Bakermans. Regarding claim 25, Bakermans teaches a punching machine for releasing a slug 35 adhering to a stamp 10 including a cutting plate 28 provided with at least one cutting opening 44, at least one stamp 10 for linear intermittent displacement which is displaceable between a position in which the cutting opening in the cutting plate is left clear by the stamp and a position in which the stamp is carried through the cutting opening, and wherein the stamp passes close-fittingly through the cutting opening of the cutting plate, wherein the cutting opening in the cutting plate has a scraping edge 48 for releasing the slug 35 adhering to the stamp 10. Bakermans also teaches that the cutting plate is adapted to support a material layer 5 for processing, and a side 46 of the cutting plate remote from the side 29 supporting the material layer is substantially non-parallel relative to the side 29 of the plate supporting the material layer such that only a part of a periphery of the slug 35 adhering to the stamp 10 is released by the scraping edge. See Figs. 9-12 and col. 5, lines 29-68 and col. 6, lines 1-11 in Bakermans.

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Regarding claim 27, Bakermans teaches everything noted above including that the cutting plate 28 is adapted to support a material layer 5 for processing, and the edge 52 of the cutting opening on the side remote from the side supporting the material layer is sharp.

Regarding claim 29, Bakermans teaches everything noted above including that the cutting plate 28 is supported by a punch plate 30 with a passage for the slug connecting onto the cutting opening 44 in the cutting plate, which passage is larger than the cutting opening.

Regarding claims 30, Bakermans teaches everything noted above including that the punch plate supports a plurality of plates. It should be noted that each side of the cutting opening has a cutting plate that is supported by the punch support plate.

Regarding claims 31, Bakermans teaches everything noted above including that the cutting plate 28 is connected releasably to the punch plate 30. See col. 30, lines 65-68 and col. 4, line 1.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

To the degree that it could be argued that Hashimoto does not teach that the cutting plate is attached to a separate punch plate, the rejection below is applied.

5. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto or in view of Isamu (JP 07 132497 A). Regarding claim 29-31, Hashimoto

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teaches everything noted above except separate (not integrated) plate punch that releasably supports separate punch plate. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the cutting plates from the punch in Hashimoto, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

In addition, the used of separate cutting plates releasably supported by a punch plate is well known in the art such as taught by Isamu (JP 07 132497 A). Isamu teaches a plurality cutting plates 3 releasably supported by a punch plate 11. See Fig. 1 in Isamu. It would have been obvious to a person of ordinary skill in the art to separately and releasably connect the cutting plates in Hashimoto's cutting device to the punch plate, in order to enable the user to replace the cutting plates.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bakermans. Regarding claim 26, Bakermans teaches everything noted above including that the free space "C" between the stamp 10 and the associated cutting plate 28 is about 0.025 mm. Bakermans does not teach explicitly that the clearance or the free space is less than 0.025 mm. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select less than 0.02 mm clearance or free space between the punch plate and the stamp in Bakermans' punching apparatus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Response to Amendment***



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7. Applicant's arguments filed on 05/27/09 have been fully considered but they are not persuasive.

Applicant's argument that Hashimoto does not teach a scraping edge is not persuasive. The bottom edge of the cutting edge 3a of the cutting plate 3 blocks a chad or a small metal piece attached to the punch 2 during the return stroke of the punch. Therefore, the cutting edge 3a can be considered as a scraping edge that scrap the small metal piece formed when the punch hole is punched in the soft metal sheet and helps the small metal piece to drop out of the undercut portion 3b. See paragraph 56 and Fig. 5 in Hashimoto.

Applicant states that Hashimoto teaches that gate 13b function as a scraper that removes fragment of metal. Applicant also argues that edge 3a only functions as means to permit a chad to freely drop out of the undercut portion 3b and does not function as a scraper for metal slug. Firstly, the punching machine in the instant invention is similar to Hashimoto's punching machine. The instant invention includes an edge 11 for scraping or removing a chad 9 or a slug 9. See Figs, 1A-1C in the instant application. The edge 3a of the cutting plate of Hashimoto similar to the edge 11 of the cutting plate of the instant invention removes or scrap slug or chad adhered to the stamp. Applicant fails to elaborate how the edge 11 of the cutting plate in the instant application functions differently than the edge 3a of the cutting plate of Hashimoto. If there is a chad or slug that is adhered to the stamp 2 of Hashimoto's punching machine naturally will be scraped or removed by the edge 3a as the stamp 3 moves upwardly and the chad or slug contacts the edge 3a. Therefore, edge 3a is a scraping edge. Secondly, Hashimoto teaches that the gate 13b removes small pieces or fragments of metal adhered to the stamp. The edge 13b does not remove or scrap the slug or

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chad or a punch out portion of the soft metal adhered to the stamp 2; instead edge 3a removes or scraps the slug or chad adhered to the stamp during upward movement of the stamp.

Applicant's argument with respect to claim 19 is addressed above, since applicant again argues that only gate 13b is the only scraping edge for removing slug or fragment of metal. However, as stated above edge 13a is a scraping edge. The slug could be removed by contacting the tip of the edge 13a which is considered to be only a part of the periphery from the cutting plate.

Applicant's argument that the edge of the cutting edge portion 3a that is remote from the side supporting the material layer does not enclose an angle with a cutting edge of the stamp is not persuasive. As stated above, the edge 3b of the cutting opening "a" at least locally encloses an angle of zero or others with a cutting edge of the stamp. The edge 3b is remote from the supporting surface of the cutting plate.

Applicant's argument that Examiner's assertion that the cutting edge 3a of Hashimoto can be considered as a scraping edge is in conflict with express teaching of Hashimoto that the chad or small piece of metal drops freely drops out of the undercut portion 13 is not persuasive. Firstly, Hashimoto does not disclose that the edge 3a is not capable of scraping metal or small pieces of workpiece that is attached to the punch while the punch is retracted upwardly. Secondly, the device in Hashimoto could be used to cut the same material in the instant invention that produces the slug 9 attached to the punch 2. In this case, the slug that is attached to the punch also is scraped by the edge 3a in Hashimoto's device when the punch is retracted upwardly. Thirdly, Similar to Hashimoto's apparatus that includes an undercut portion "3b" the instant invention also includes undercut portion. In this case, the undercut

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portion in the instant invention also could be used for freefall of a chad or a small metal piece. That does not disqualify the edge 11 of the instant invention as a scraping element for scraping the chad or small piece of metal.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Ghassem Alic/

Primary Examiner, Art Unit 372

August 20, 2009